CLAIMS

1.   A method of transferring data between a primary station and a plurality of secondary stations, each secondary station having a distinguishing identifier, comprising assigning the secondary stations to a plurality of categories, storing in the primary station the identifiers of the secondary stations which are in each category, the primary station transmitting beacon signals containing indications of those categories for which it has data to be transferred, a secondary station responsive to determining that there is an indication of its assigned category in a received beacon signal transmitting a response including the secondary station's identifier, and the primary station in response to determining that it has data for transfer to the secondary station having the indicated identifier, transferring the data to the said secondary station.

2.   A method as claimed in claim 1, characterised in that the beacon signals are transmitted intermittently.

3.   A method as claimed in claim 1 or 2, characterised in that the primary station acknowledges negatively if it does not have a data signal for a secondary station in an indicated category.

4.   A method as claimed in claim 1, 2 or 3, characterised by a secondary station intermittently monitoring for the presence of beacon signals.

5.   A method as claimed in any one of claims 1 to 4, characterised by a secondary signalling a request for a change of category to the primary station.

6.   A method as claimed in claim 5, characterised in that a change of category request signal includes an indication of the category to be changed to.

5   7.   A method as claimed in any one of claims 1 to 6, characterised in that each of the categories comprise a common operating characteristic.

8.   A signalling system comprising at least one primary station and a plurality of secondary stations, each of the secondary stations having a
10   distinguishing identifier, the primary station comprising means for storing into which of a plurality of categories the identifiers of the secondary stations have been assigned, and a transmitter for transmitting beacon signals containing indications of those categories for which it has data to be transferred, each secondary station having means for recognising an indication of its category in
15   a received beacon signal and means for transmitting a response including the secondary station's identifier and the primary station having means for determining that it has data for transfer to the secondary station having a recognised identifier and for causing the data to be transmitted to the secondary station.
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9.   A system as claimed in claim 8, characterised in that the primary station has means for causing the transmitter to transmit the beacon signals intermittently.

25   10.   A system as claimed in claim 8 or 9, characterised in that the primary and secondary stations operate on a single frequency channel.

11.   A system as claimed in claim 8, 9 or 10 characterised in that the primary station has means for transmitting a negative acknowledgement if it
30   does not have a data signal for a secondary station in an indicated category.

12.   A system as claimed in anyone of claims 8, to 11, characterised by a secondary station having means for intermittently monitoring for the presence of beacon signals.

13.   A system as claimed in any one of claims 8 to 12, characterised by a secondary signalling having means for transmitting a request for a change of category to the primary station.

14.   A system as claimed in claim 13, characterised in that said means for transmitting a request for a change of category includes means for indicating the category to be changed to.

15.   A secondary station for use in a signalling system in which a primary station transmits beacon signals containing indications of those categories of secondary stations for which it has data, the secondary station comprising a transceiver, means for storing its allocated category and its own identifier, means for storing a wakeup sequence for the transceiver, means responsive to receiving a beacon signal for checking if the beacon signal contains an indication of its category, and if it has, for causing the transceiver to transmit to the primary station a response message including its identifier, and means responsive to a reply from the primary station for causing the secondary station either to remain energised to receive data or to adopt a sleep mode.

16.   A primary station for use in a data signalling system comprising a plurality of secondary stations, each of the secondary stations having a distinguishing identifier, the primary station comprising means for assigning the secondary stations to a plurality of categories, means for storing the identifiers of the secondary stations in each category, a transmitter for transmitting beacon signals containing indications of those categories for which it has data to be transferred, means for receiving responses including identifiers from secondary stations assigned to the categories indicated in the beacon signals,

means for checking if there is data for transmission to the identifier of the secondary station which sent a response and, if so, for causing the data to be transmitted by the transmitter.